THOR-FLX / HIIIr Preparation and Use

2.1 General

2.1.1 Hardware and Fasteners

All hardware and fasteners used on the THOR-FLX / HIIIr unit are standard English sizes. Depending on the function of a specific assembly, the thread sizes may be UNC or UNF in sizes ranging from 0-80 to 3/8". The following abbreviations are used throughout this manual, as well as, in the drawing package.

SCREW ABBREVIATIONS:

F.H.S.C.S.	FLAT HEAD SOCKET CAP SCREW
B.H.S.C.S.	BUTTON HEAD SOCKET CAP SCREW
S.H.C.S.	SOCKET HEAD CAP SCREW
S.S.S	SOCKET SET SCREW

MATERIAL ABBREVIATIONS:

CRS	COLD ROLLED STEEL
SS	STAINLESS STEEL
AL	ALUMINUM

2.1.2 Tools Required

The following tool list includes the recommended standard tools which should be available at the test labs using the THOR-FLX / HIIIr equipped dummy. This list will allow the laboratory personnel to make any necessary adjustments and to perform a standard through disassembly and assembly procedures. These tools are shown in **Figure 2.1.**

Set of T Handle Hex Wrenches (Ball End)	Size: 3/32" to 3/8"
Set of L Handle Hex Wrenches (Ball End)	Size: 0.050" thru 3/8"
Set of Straight Hex Wrenches (Screwdriver Style)	Size: 0.050" thru 3/8"
Socket Set 1/4" Drive	Size: 1/4" thru 3/4" 1/4" thru 5/8" Deep
Torque Wrench	Range: 5 to 80 ft-lb
Hex Bit Socket Set	Size: 5/32" to 3/8"
Needle Nose Pliers	
Diagonal Cutters	
Flat Head Screwdriver	

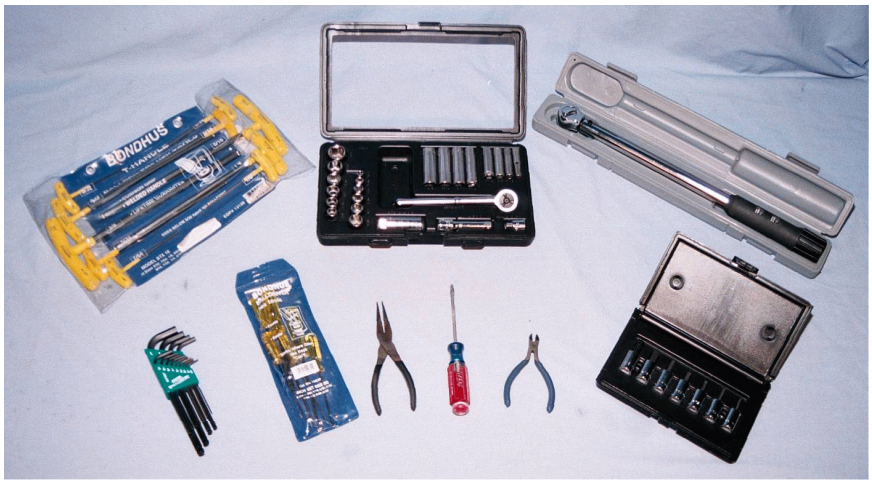

Figure 2.1- Required tools

2.1.3 Bolt Torque Values

The following table indicates the recommended torque values for the various bolt sizes used in the THOR-FLX / HIIIr unit assemblies.

Bolt Size	Torque Range (Ft-lb)	Torque Range (N-m)
#4	10 to 16 (in-lb)	1.1 to 1.75
#6	19 to 29 (in-lb)	2.1 to 3.25
#8	2.5 to 3.8	3.4 to 5.1
#10	3.5 to 5.3	4.75 to 7.2
1/4	7 to 9	9.5 to 12
5/16	13 to 15	17 to 20
3/8	29 to 31	39 to 42

For bolt sizes smaller than those listed, common sense should dictate a reasonably snug torque which will prevent the fastener from vibrating use during impact.

2.2 THOR-FLX / HIIIr Main Assembly Serial Number

Each completed THOR-FLX / HIIIr assembly is issued a main assembly serial number which is used to track the completed assembly through testing and calibration. A numbered

adhesive sticker is affixed to the tibia assembly of each THOR-LX / HIIIr unit to provide this main assembly serial number. This main assembly serial number should be used as a reference during any correspondence regarding the use of this unit.

2.3 Part Numbers & Serial Numbers

Each major component of the THOR-FLX / HIIIr unit is marked with a part number which is identical to the drawing number of the part in the drawing package. Exceptions to the marked serial numbers include very small components and rubber washers and bumpers. These part numbers will be referred to throughout the user s manual to aid in the disassembly, inspections, calibration, repair and assembly of any of the THOR-FLX / HIIIr components.

In addition to the part numbers, several of the assemblies are given a serial number which is used to identify and track the manufacture and distribution of the parts. The following sub-assemblies are assigned unique serial numbers, which are marked on the parts at the time of manufacture, these serial numbers can be used to trace various parameters of the manufacturing process including date, chemical batch numbers, etc: tibia shin guard, knee bumper, D/P joint soft stop, I/E joint soft stop, and tibia compliant element assembly

2.4 Additional Reference Materials:

The following reference materials are available from the manufacturer and at the NHTSA website to provide specific information about various aspects of the THOR-FLX / HIIIr performance and operation.

THOR-FLX / HIIIr Drawing Package - This drawing package - in AutoCAD V.2000 - is available for all users of the THOR-FLX / HIIIr from both the manufacturer and at the NHTSA website.

Serial Number Reference Sheet - This data sheet provides serial number information on various THOR-FLX / HIIIr components to allow performance tracking. This information is available from the manufacturer.

THOR-FLX / HIIIr Calibration Sheets - These sheets contain all of the calibration information for the THOR-FLX / HIIIr instrumentation. This information is available from the manufacturer.

THOR-LX / HIIIr Certification Procedures and Requirements Document - This document, which details the performance and calibration procedures for the *THOR-FLX / HIIIr* assembly - is available for all users of the THOR-FLX / HIIIr from both the manufacturer and at the NHTSA website.